AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1- 9. (cancelled).

10. (currently amended): A rotation angle detection device comprising:

a stator provided with a one-phase excitation winding and two-phase output windings; and

a rotor having salient poles,

~~characterized in that~~wherein the two-phase output windings are wound around a plurality of teeth of the stator, and

respective numbers of turns of the two-phase output windings are obtained by using m-phase windings~~(~~, where m is an integer of 3 or more~~)~~, the m-phase windings being defined in advance to convert the numbers of turns of the m-phase windings into those of two-phase windings.

11. (currently amended): A rotation angle detection device according to claim 10,

~~characterized in that~~wherein, when the numbers of turns of the m-phase windings~~(~~, where m is an integer of 3 or more~~)~~, are converted into ~~those of~~ two-phase windings, the conversion is performed according to the following expression:

$$N_{\alpha i} = k\sum_{n=1}^{m} N_{ni}\cos(\gamma + \frac{2(n-1)}{m}\pi)$$

$$N_{\beta i} = k\sum_{n=1}^{m} N_{ni}\sin(\gamma + \frac{2(n-1)}{m}\pi)$$

~~(~~where γ represents an arbitrary constant, k represents an arbitrary constant excluding zero, a subscript i represents a number of a tooth, α and β represent two-phase windings after conversion, and n represents nth phase before conversion~~. In other words~~, $N_{\alpha i}$ and $N_{\beta i}$ represent the number of turns of the α-phase and β-phase windings in ~~the~~ an ith tooth, respectively, and N_{ni} represents the number of turns of nth phase winding of the ith tooth.~~)~~

12. (currently amended): A rotation angle detection device according to claim 10, ~~characterized in that~~wherein the number of teeth of the stator is ~~assumed to be~~ 3n ~~(~~, where n is a natural number~~)~~.

13. (currently amended): A rotation angle detection device according to claim 10, ~~characterized in that~~wherein, ~~in the case in which~~when the number of teeth of the stator is an odd number, a winding pattern of the excitation winding is a pattern repeated by ~~the number of times of~~ a number which is the same as a value of a divisor of the number of teeth.

14. (currently amended): A rotation angle detection device according to claim 12,

~~characterized in that~~wherein the number of teeth of the stator is nine, and a shaft multiple angle is 4 or 8.

15. (currently amended): A rotation angle detection device according to claim 13 , ~~characterized in that~~wherein the number of teeth of the stator is nine, and a shaft multiple angle is 4 or 8.

16. (currently amended): A rotation angle detection device according to claim 12, ~~characterized in that~~wherein the number of teeth of the stator is twelve, and a shaft multiple angle is 4 or 8.

17. (currently amended): A rotation angle detection device according to claim 10, ~~characterized in that~~wherein the numbers of turns of the two-phase output windings are adjusted such that the two-phase output windings do not pick_up a magnetic flux of a spatial order which is the same as a spatial order of a change in permeance of the rotor or a magnetic flux of a spatial 0^{th} order.

18. (currently amended): A rotation angle detection device according to claim 10, ~~characterized in that~~wherein the numbers of turns of the two-phase output windings are adjusted such that the two-phase output windings do not pick up a specific component of a gap magnetic flux which is generated when a rotation shaft of the rotor and a center of the stator

deviate from each other~~ or when a center and the rotation shaft of the rotor deviate from each other~~.

19. (currently amended): A dynamo-electric machine~~, characterized by~~ comprising:

~~the~~a rotation angle detection device ~~according to claim 10~~ having a stator provided with a one-phase excitation winding and two-phase output windings and a rotor having salient poles,

wherein the two-phase output windings are wound around a plurality of teeth of the stator, and

respective numbers of turns of the two-phase output windings are obtained by using m-phase windings, where m is an integer of 3 or more, the m-phase windings being defined in advance to convert the numbers of turns of the m-phase windings into those of two-phase windings.